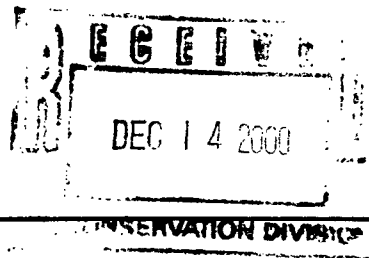


3R - 222

REPORTS

DATE:

1999



Certified Mail: # Z 213 707 369

December 13, 2000

Mr. William C. Olson
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87504

**RE: Missing Information for Groundwater Sites Requested for Closure in the 1999
Pit Project Annual Groundwater Report**

Dear Mr. Olson:

El Paso Field Services Company (EPFS) hereby submits the missing information requested in our December 11, 2000 telephone conversation. You indicated the "Field Pit Assessment Form", "Field Pit Remediation / Closure Form" and supporting documentation were not included with the four non-Navajo and two Navajo pits requested for closure in the "1999 Pit Project Closure Report" submitted March 24, 2000.

Attached please find the above mentioned information for the following sites:

1. K-51 Line Drip T26N, R06W, Sec. 6, Unit A,
2. Mesa CPD T29N, R14W, Sec. 4, Unit E, Information included in 1998 Groundwater Report; copy provided.
3. Sheets Well No. 2 T31N, R9W, Sec. 28, Unit H
4. Turner A # 1 T31N, R11W, Sec. 34, Unit K, Pits 1 and 2
5. Charlie Pah # 2 T27N, R9W, Sec. 12, Unit B, (Navajo Jurisdiction)
6. John Charles # 8 Information not included. OCD approved site for closure July 8, 1998. Navajo EPA has not approved site for closure.

EPFS apologizes for omission of the attached information in the original closure request. If you have any questions or require any additional information, please contact me at (505) 599-2124.

Sincerely,

Scott T. Pope P.G.
Senior Environmental Scientist

Enclosures: as stated

xc: Mr. Denny Foust, NMOCD - Aztec - Certified Mail # Z 387 666 165

Mesa CPD

EPFS GROUNDWATER PITS 1998 CLOSURE REPORT

MESA CPD
Meter/Line ID - 02643

SITE DETAILS

Legals - Twn: 29N Rng: 14W Sec: 4 Unit: E
NMOCD Hazard Ranking: 40 Land Type: FEE
Operator: DUGAN PRODUCTION CORP.

PREVIOUS ACTIVITIES

Site Assessment: Nov-93 Excavation: Nov-93 (103 cy) Soil Boring: Mar-97
Monitor Well: Mar-97 Well Points: Oct-1997

The pit was excavated to 7 feet beneath ground surface (bgs) and approximately 103 cubic yards of impacted soil were removed. The headspace soil reading from the excavation bottom was 346.8 ppm. Soil analytical was as follows; benzene - <0.01 mg/kg, total BTEX - 0.10 mg/kg, TPH (418.1) - 26 mg/kg.

One soil boring was drilled in the center of the former pit. Groundwater was encountered at approximately 7 feet bgs and a monitoring well was installed. Quarterly groundwater monitoring was initiated on 4/11/97 and continued through 4/27/98. Groundwater analytical data are presented in Table 1. Groundwater analytical data prior to 1998 has been previously submitted in the 1997 Annual Report, along with drill logs and well installation diagrams.

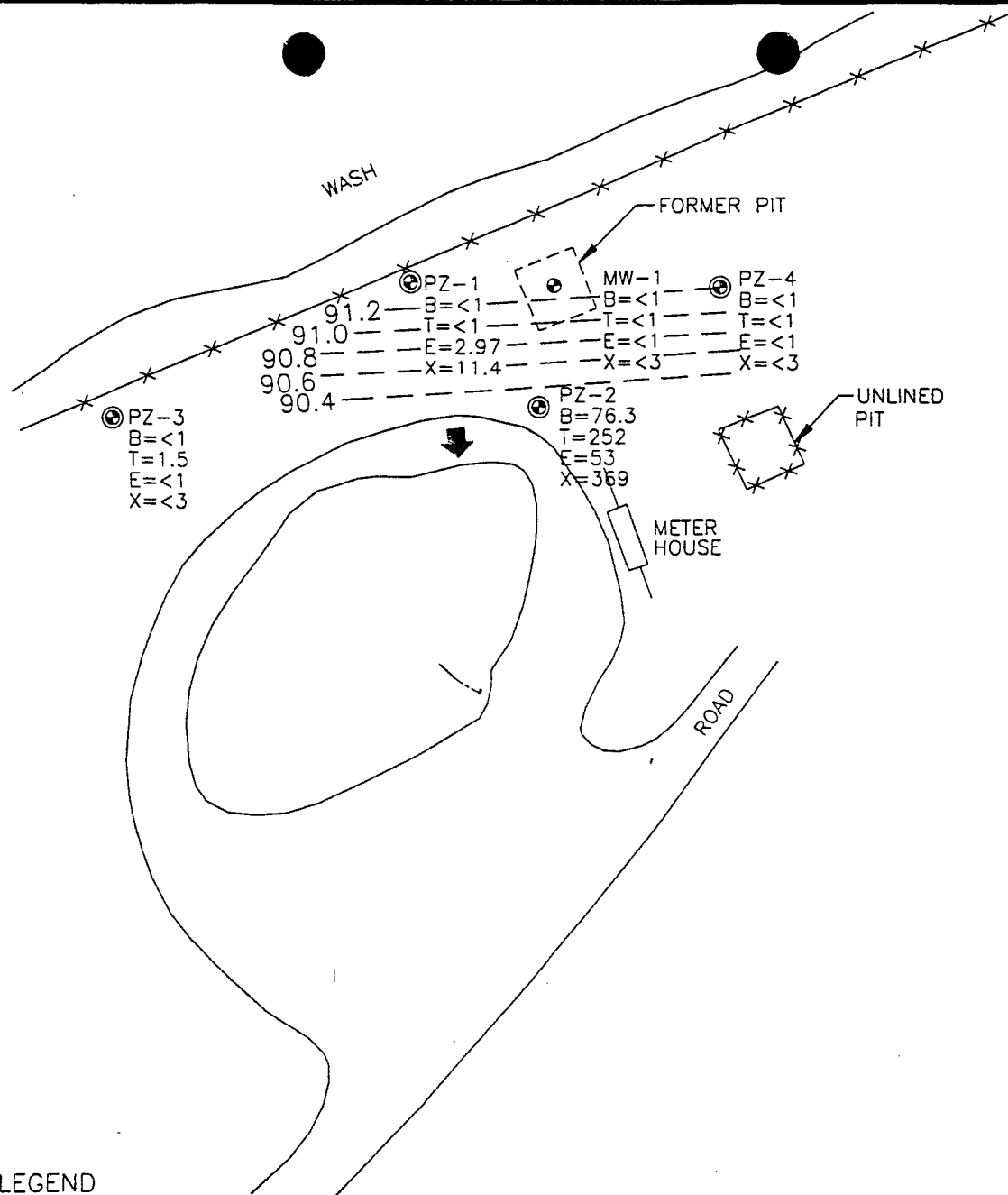
In October 1997 a well point investigation was performed to determine if downgradient migration of contamination had occurred. Four temporary well points were installed in the downgradient direction and samples collected. Well point installation diagrams and well point sample data can be found in the 1997 Annual Report.

CONCLUSION

Groundwater analytical data has been below standards for 4 consecutive quarters since quarterly sampling was initiated, indicating minimal impact to groundwater.

RECOMMENDATIONS

- EPFS request closure at this site.
- Following OCD approval for closure, MW-1 will be abandoned following OCD approved abandonment procedures.



LEGEND

⊙ PZ-1 APPROXIMATE PIEZOMETER LOCATION AND NUMBER

⊗ MW-1 APPROXIMATE MONITORING WELL LOCATION AND NUMBER

B BENZENE (ug/L)
T TOLUENE (ug/L)
E ETHYL BENZENE (ug/L)
X XYLENE (ug/L)

ug/L MICROGRAMS PER LITER

—91.2— GROUNDWATER POTENTIOMETRIC SURFACE

➔ APPROXIMATE GROUNDWATER GRADIENT

0 30
FEET



COL. 1752040-001



TITLE:
MESA CPD
02643

DWN: TMM	DES.: CC
CHKD: CC	APPD:
DATE: 1/22/98	REV.: 0

PROJECT NO.: 17520
EPFS GW PITS

FIGURE 1

LOCATION PIT CLOSURE FORM

GENERAL

Meter: 02643 Location: MESA CPD
 Operator #: 1862 Operator Name: DUGAN P/L District: KUTZ
 Coordinates: Letter: C Section 4 Township: 29 Range: 14
 Pit Type: Dehydrator _____ Location Drip: X Line Drip: _____ Other: _____
 Date Started: 11-09-93 Run: 02 23

SITE ASSESSMENT

NMOCD Zone: Original ☐ Land Type: BLM ☐
 (From NMOCD Expanded ☒ State ☐
 Maps) Outside ☐ Fee ☒
 Indian _____

Depth to Groundwater

Less Than 50 Ft (20 points) ☒
 50 Ft to 99 Ft (10 points) ☐
 Greater Than 100 Ft (0 points) ☐

Wellhead Protection Area:

Is it less than 1000 ft from wells, springs, or other sources of fresh fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? ☐ YES (20 points) ☒ NO (0 points)

Horizontal Distance to Surface Water Body

Less Than 200 Ft (20 points) ☒
 200 Ft to 1000 Ft (10 points) ☐
 Greater Than 1000 Ft (0 points) ☐

Name of Surface Water Body COOLIDGE

(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)

TOTAL HAZARD RANKING SCORE: 40 POINTS

REMARKS

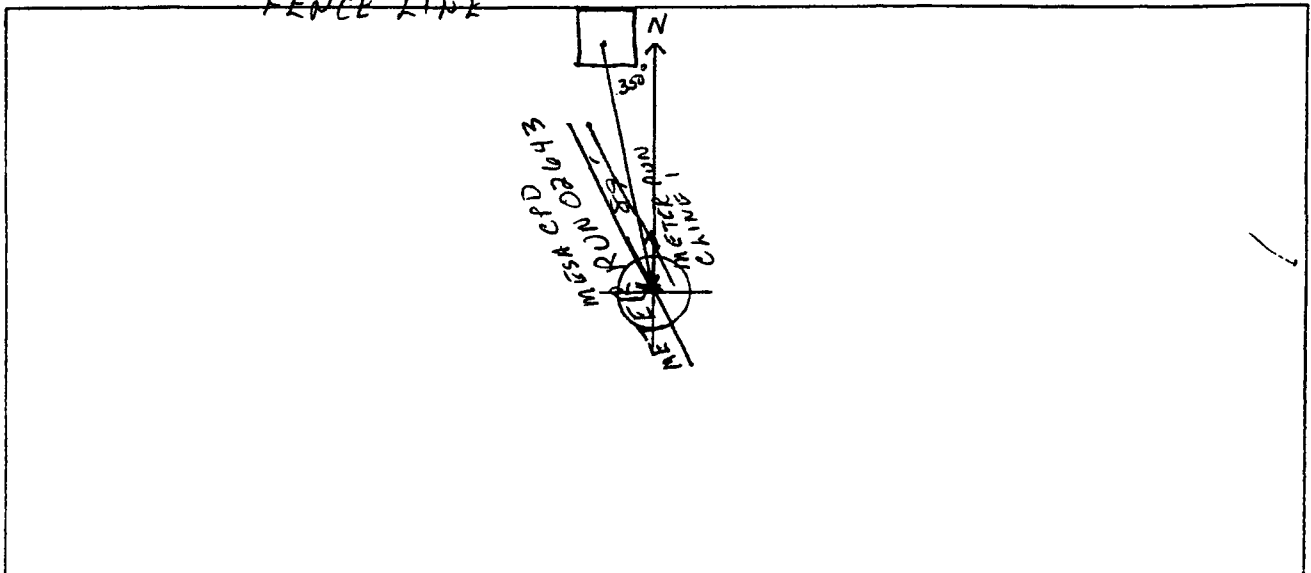
Remarks : _____

ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 350° Footage from Wellhead 49'
 b) Degrees from North _____ Footage from Dogleg _____
 Dogleg Name _____
 c) Length : 15' Width : 09' Depth : 30"
 NOW 21' 19' 7'2"

DOWNSTREAM
END OF
METER RUN

ORIGINAL PIT LOCATION



CLOSURE

Remediation Method : Excavation ☒ Approx. Cubic Yards 103
☐ Onsite Bioremediation
☐ Alternative Method
 (Backfill Pit Without Excavation)
 Remediation Location : Envirotech ☐
 Other Facility ☒ Name: TIERRA ENVIRONMENTAL
 Onsite ☐
 Pit Closure Date: TO BE DETERMINED Pit Closed By: BEI
 Signature of Specialist: [Signature]

REMARKS

Remarks :

PHASE I EXCAVATION

SAMPLING INFORMATION

OUTSIDE ZONES	Pit Located Outside Both Water Vulnerable Zones	
	Sample Number: _____ Date Taken: _____	
	Sampled By: _____ Time Sampled: _____	
	Sample Depth at Center of Pit: _____ Feet	
Verification ☐ Blank ☐ Duplicate ☐		
INSIDE ZONES FIELD HEADSPACE BELOW 100ppm	Pit Located in Original Zone or Expanded Zone	
	Sample Number: _____ Date Taken: _____	
	Sampled By: _____ Time Sampled: _____	
	Sample Depth at Center of Pit: _____ Feet	
Pit Bottom Field Headspace: _____ ppm		
Verification ☐ Blank ☐ Duplicate ☐		
INSIDE ZONES FIELD HEADSPACE ABOVE 100ppm	Pit Located in Original Zone or Expanded Zone	
	Sample Number: <u>3-02643-L-V-01</u> Date Taken: <u>11-09-93</u>	
	Sampled By: <u>Ruby Cosby</u> Time Sampled: _____	
	Sample Depth at Center of Pit: <u>7'0</u> Feet	
Five Point Composite Headspace: <u>346.8</u> ppm		
Verification ☒ Blank ☐ Duplicate ☐ OTHERS ☒		



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-01, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1540

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 16-Nov-93

DESCRIPTION: Light Brown Course Sand

REMARKS: MIDDLE BOTTOM

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.01	MG/KG	None
TOLUENE	0.010	MG/KG	None
ETHYL BENZENE	0.014	MG/KG	None
TOTAL XYLENES	0.077	MG/KG	None
TOTAL BTEX	0.10	MG/KG	None
TPH (418.1)	26	MG/KG	None
HEADSPACE PID	347	PPM	None
PERCENT SOLIDS	80	%	None

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

Narrative:

Surrogate Recovery was at 92.7 % for this sample All QA/QC was acceptable.

Approved By:

John Latch

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-02, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1615

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 16-Nov-93

DESCRIPTION: Brown Clay with Large Clumps

REMARKS: SOUTH BOTTOM

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.010	MG/KG	None
TOLUENE	<0.010	MG/KG	None
ETHYL BENZENE	<0.010	MG/KG	None
TOTAL XYLENES	<0.010	MG/KG	None
TOTAL BTEX	<0.040	MG/KG	None
TPH (418.1)	<10	MG/KG	None
HEADSPACE PID	17	PPM	None
PERCENT SOLIDS	82	%	None

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

Narrative:

Surrogate Recovery was at 87.1 % for this sample All QA/QC was acceptable.

Approved By:

John L. Luster

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-03, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1620

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 16-Nov-93

DESCRIPTION: Brown Sand and Clay

REMARKS: NORTH BOTTOM

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.010	MG/KG	None
TOLUENE	0.49	MG/KG	None
ETHYL BENZENE	0.047	MG/KG	None
TOTAL XYLENES	0.39	MG/KG	None
TOTAL BTEX	0.93	MG/KG	None
TPH (418.1)	<10	MG/KG	None
HEADSPACE PID	540	PPM	None
PERCENT SOLIDS	80	%	None

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

Narrative:

Surrogate Recovery was at 93.1 % for this sample All QA/QC was acceptable.

Approved By:

John L. Linder

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-04, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1630

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 17-Nov-93

DESCRIPTION: Grey Course Sand

REMARKS: COMPOSITE GREY

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.13	MG/KG	None
TOLUENE	19	MG/KG	D1
ETHYL BENZENE	0.23	MG/KG	None
TOTAL XYLENES	12	MG/KG	None
TOTAL BTEX	31	MG/KG	None
TPH (418.1)	1,645	MG/KG	None
HEADSPACE PID	746	PPM	None
PERCENT SOLIDS	90	%	None

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

Narrative:

Surrogate Recovery was at 99.0 % for this sample All QA/QC was acceptable.
in "D1" qualifier indicates that the analyte concentration exceeded the calibration curve limit.

Approved By: John L. Linder

24-Nov-93



FIELD SERVICES LABORATORY
ANALYTICAL REPORT

SAMPLE IDENTIFICATION

SAMPLE NUMBER: 3-02643-L-V-05, Mesa CPD

SAMPLE DATE: 9-Nov-93

SAMPLE TIME (Hrs.): 1635

SAMPLED BY: Ricky Cosby

DATE OF TPH EXT. & ANAL.: 15-Nov-93

DATE OF BTEX ANALYSIS: 17-Nov-93

DESCRIPTION: Brown Sand with Black Pebbels

REMARKS: COMPOSITE BLACK

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIER
BENZENE	<0.20	MG/KG	None
TOLUENE	12	MG/KG	D1
ETHYL BENZENE	0.93	MG/KG	None
TOTAL XYLENES	7.7	MG/KG	None
TOTAL BTEX	20	MG/KG	None
TPH (418.1)	2,019	MG/KG	None
HEADSPACE PID	684	PPM	None
PERCENT SOLIDS	86	%	None

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

Narrative:

Surrogate Recovery was at 91.2 % for this sample All QA/QC was acceptable.
The "D1" qualifier indicates that the analyte concentration exceeded the calibration curve limit.

Approved By:

John L. Lubi

24-Nov-93



CHAIN OF CUSTODY RECORD

Page _____ of _____

Project Number		Project Name		Requested Analysis		Contract Laboratory P.O. Number	
Samplers: (Signature)		Date:		Requested Analysis		Contract Laboratory P.O. Number	
Lab ID		Date	Time	Matrix	Sample Number	Remarks	
		11-09	0915	X	3-05A11-1-Y-01		LAT. 5A-11
		11-09	1540	X	3-02643-L-Y-01		MIDDLE
		11-09	1615	X	3-02643-L-Y-02		SOUTH
		11-09	1620	X	3-02643-L-Y-03		NORTH
		11-09	1630	X	3-02643-L-Y-04		GRAY
		11-09	1635	X	3-02643-L-Y-05		BLACK
/							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
[Signature]		11-09 1810		[Signature]		11-10 0740	
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time	
[Signature]				[Signature]		11-10 0740	
Requested Turnaround Time:				Results & Invoices to:			
☐ Routine ☐ Rush				North Region Laboratory			
Carrier Co.				El Paso Natural Gas Company			
Bill No.:				P. O. Box 4990			
				Farmington, New Mexico 87499			
				505-519-2144			
				FAX: 505-599-2261			

PHASE II SOIL BORING

RECORD OF SUBSURFACE EXPLORATION

PHILIP ENVIRONMENTAL SERVICES INC.

1000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH- 2

Well # 1

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520 Phase 6001.77

Project Location MESA CPD - 02643

Well Logged By

D CESARK

Personnel On-Site

D CHARLEY, J LONG

Contractors On-Site

Client Personnel On-Site

Elevation

Borehole Location T29-R14-S4-Ltr C

GWL Depth 7' BGS

Logged By D CESARK

Drilled By M DONOHUE

Date/Time Started 3/4/97- 1430

Date/Time Completed " - 1500

Drilling Method 4 1/4" ID HSA

Air Monitoring Method PID, CGI

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S	
0				BACKFILL						
5				TO						
7				7'						
8				GW @ 7' BGS						
10				SILTSTONE @ 8'						
15				TD = 13'						
20										
25										
30										
35										
40										

Comments:

GW ENCOUNTERED @ 7' BGS, SILTSTONE BEDROCK @ 8', AUGER REFUSAL IN BEDROCK @ 13' BGS. NO SAMPLE COLLECTED. SET GW NON. WELL IN CTR. OF FORMER PIT. PLEASE REFER TO WELL COMP. DIAGRAM.

Geologist Signature

[Signature]

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services, Inc.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # 2
Well # 1
Page 1 of 1

Project Name EPFS GW PITS
Project Number 17520 Phase 6002.77
Site Location MESA CPD - 02643

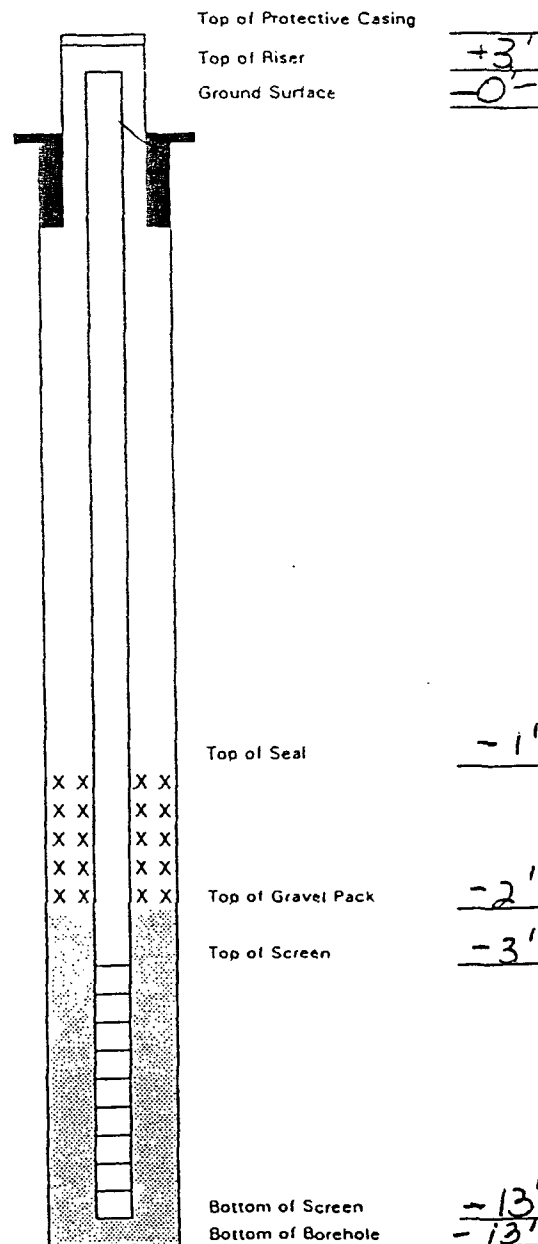
Elevation _____
Well Location T29N-R14W-S4-L1C
GWL Depth 7' BGS
Installed By M DONOHUE

On-Site Geologist D CESARK
Personnel On-Site D CHARLEY, J LONG
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 3/4/97 - 1500
Date/Time Completed " - 1600

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		N/A
Bottom of Permanent Borehole Casing		N/A
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Riser	SCH 40 PVC	+3'
Bottom of Well Riser	"	-3'
Top of Well Screen	.010 SLOT	-3'
Bottom of Well Screen	"	-13'
Top of Peltonite Seal	ENVIROPLUG	-1'
Bottom of Peltonite Seal	"	-2'
Top of Gravel Pack	10-20 SAND	-2'
Bottom of Gravel Pack	"	-13'
Top of Natural Cave-In		-13'
Bottom of Natural Cave-In		-13'
Top of Groundwater		-7'
Total Depth of Borehole		-13'



Comments: _____

011/

Well Development and Purging Data

Development	Purging
------------------------	--------------------

Well Number

MW-1

Serial No. WDPD.

Page 1 of 1

Project Name

GW PITS

Project Manager

C CHANCE

Project No.

Client Company

EPFS

Phase.Task No. 6003.11

Site Name MESA CPD - 02643

MESA CPD - 02643

Site Address

Development Criteria

☒ 3 to 5 Casing Volumes of Water Removal
☒ Stabilization of Indicator Parameters
☐ Other

Water Volume Calculation

Initial Depth of Well (feet) 13' BGS
Initial Depth to Water (feet) 4' BGS
Height of Water Column in Well (feet) 9'

Methods of Development

Pump

☐ Centrifugal

☐ Submersible

☐ Peristaltic

☐ Other

Bailer

☒ Bottom Valve

☐ Double Check Valve

☐ Stainless-steel Kammerer

Diameter (Inches): Well 4 Gravel Pack

Item	Water Volume In Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		5.9	
Gravel Pack			
Drilling Fluids			
Total			29.5

Instruments

☒ pH Meter

☐ DO Monitor

☒ Conductivity Meter

☒ Temperature Meter

☐ Other

Serial No. (if applicable)

Water Disposal

Water Removal Data

[illegible]

Circle the date and time that the development criteria are met.

Comments: Bailed water relatively clear throughout, little silt. Wall did not budge. Water had muddy odor, but no evidence of H_2S .

Developer's Signature(s)

Date 4/9/97

Reviewer:

Date _____



Water Sampling Data

Location No. MW-1Serial No. WSD-Group List Number Sample Type: ☒ Groundwater ☐ Surface Water ☐ Other Date 4/9/97Project Name EPFS GW PITSProject No. 17520Project Manager C CHANCEPhase/Task No. 6003.77Site Name MESA CPD-02643

Sampling Specifications

Requested Sampling
Depth Interval (feet)
Requested Wait Following
Development/Purging (hours)

Initial Measurements

Time Elapsed From Final Development/Purging (hours) Initial Water Depth (feet) Nonaqueous Liquids Present (Describe)

Water Quality/Water Collection

DO = Dissolved Oxygen; Cond. = Conductivity

Date	Time	Sampler Initials	Water Quality Readings				Water Collection Data					Notes (Explain in Comments Below)
			Temp. (°C)	pH	DO (mg/L)	Cond. (µmhos/ cm)	Volume Removed (gallons)	Removal Rate (gal/min)	Pump Intake Depth (feet)	Bail	Final Water Depth (feet)	

Sample Containers

Container Type: G = Clear Glass; A = Amber Glass; P = Plastic; V = VOA Vial (Glass); O = Other (Specify)

Preservatives: H = HCl; N = HNO₃; S = H₂SO₄; A = NaOH; O = Other (Specify); - = None

Analytical Parameter List	Container			Field Filtered		Preserved	Cooled During Collection		Comments
	Number	Type	Volume (mL)	Yes	No		Yes	No	
EPA 8020 BTEX	3	G/VV	40		X	Y	X		DRC 32 (MW-1)
"	1	"	"				X		TRIP BLANK - DRC 30

Filter Type Chain-of-Custody Form Number Comments * PLEASE REFER TO WELL DEVELOPMENT + PURGING DATA FORM.Signature Date 4/9/97Reviewer Date

EL PASO FIELD SERVICES



4-24-97

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	DRC32	970261
MTR CODE SITE NAME:	2643	Mesa CPD
SAMPLE DATE TIME (Hrs):	4/9/97	1418
PROJECT:	Phase II Drilling - Initial	
DATE OF BTEX EXT. ANAL.:	4/11/97	4/11/97
TYPE DESCRIPTION:	Monitor Well	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB				

The Surrogate Recovery was at 100 for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

Date:

4/14/97

970261,4/16/97

[illegible]

**PHASE III TEMPORARY WELL
POINT DATA**

TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Bore #

Well # PZ-1

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520 Phase 6006

Site Location Mesa CPD D2642

Elevation

Well Location Ltr E -S4-T29-R14

GWL Depth 6.67 TDR

Installed By R. Padilla

On-Site Geologist C CHANCE

Personnel On-Site D Charley

Contractors On-Site

Client Personnel On-Site

Date/Time Started 10/22/97

Date/Time Complete 10/22/97

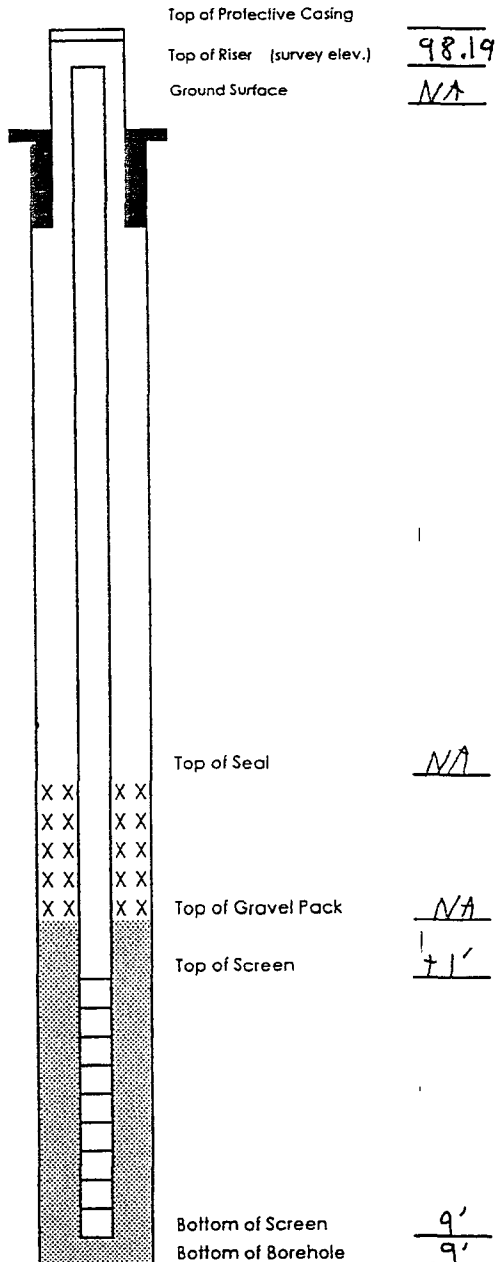
COMMENTS

- PZ1 is 275° + 26' from MW1

- Dark Black cuttings, strong odor @ ~5' BGS

- Install temp well + collect GW sample cmc 365

- Let well set overnight to get static water level



MW1 GW @ 8.45' TDR. Riser @ 99.76'

MWINSTAL.WKT

Geologist Signature

Cory Charley

TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole #

Well # PZ-2

Page 1 of 1

Project Name EPFS GW PITS

Project Number 17520 Phase 6006

Site Location Mesa CPD 02643

Elevation

Well Location Ltr E -S 4 -T 29 -R 14

GWL Depth 7.54 TOR

Installed By K Padilla

On-Site Geologist

C CHANCE

Personnel On-Site

D Chackley

Contractors On-Site

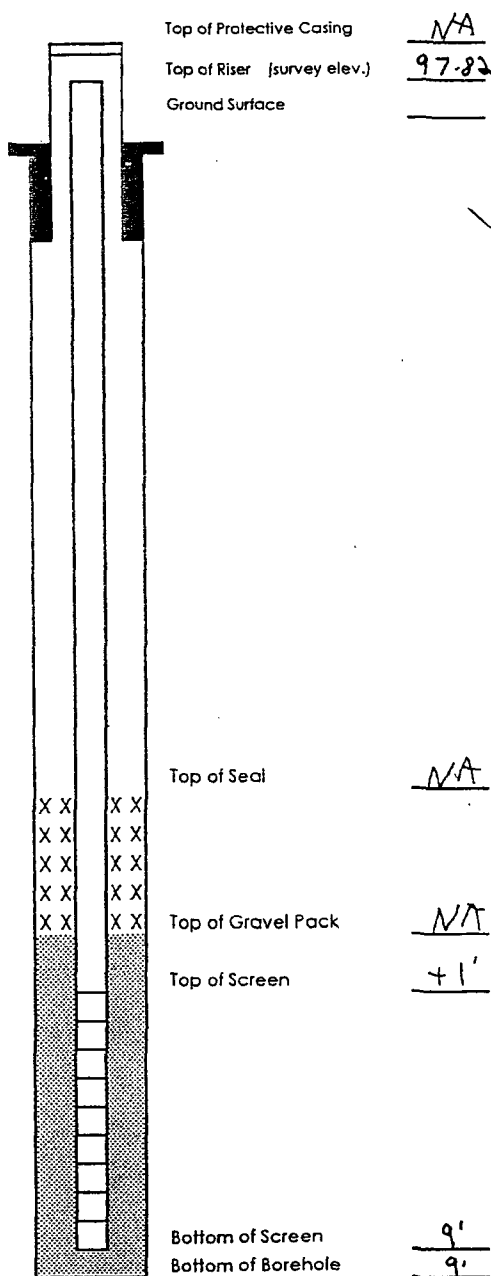
Client Personnel On-Site

Date/Time Started 10/22/97

Date/Time Complete 10/22/97

COMMENTS

- PZ2 is 195' & 52' from MW1
- Install temp. well & collect GW sample. CMC 366
- Let well set overnight to get static water level
- Dark Black sandy cuttings @ ~5-6'. May be drilling in an old pit.



(Note: Did not encounter BU @ 15'. Hole plugged to 10' & set well. May have drilled past GW @ 8'. Hole plugged to 9' & set piezo

MWINSTAL.WRI

Geologist Signature

Cory Chance

TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Borehole #
Well # PH-3
Pag 1 of 1

Project Name EPFS GW PITS
Project Number 17520 Phase 6006
Site Location Mesa CPD 02642

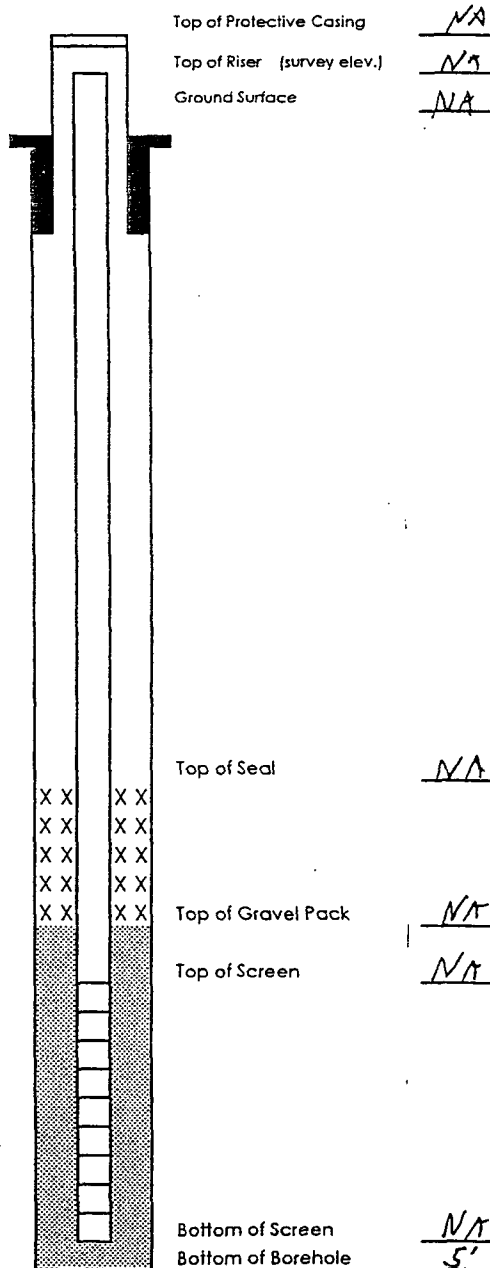
Elevation
Well Location Ltr E-S4-T29-R14
GWL Depth ~3.5' DBS
Installed By K. Padilla

On-Site Geologist C CHANCE
Personnel On-Site D. Charley
Contractors On-Site
Client Personnel On-Site

Date/Time Started 10/22/97
Date/Time Complete 10/22/97

COMMENTS

- PH3 is 80' $\downarrow$ 255° From MW1.
- GW sample collected from open hole. CMC362
- BH hole plugged to surface.



TEMPORARY PIEZOMETER INSTALLATION

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 326-2262 FAX (505) 326-2388

Borehole #
Well # PZ P24
Pag 1 of 1

Project Name EPFS GW PITS
Project Number 17520 Phase 6006
Site Location Mesa CPD 02647

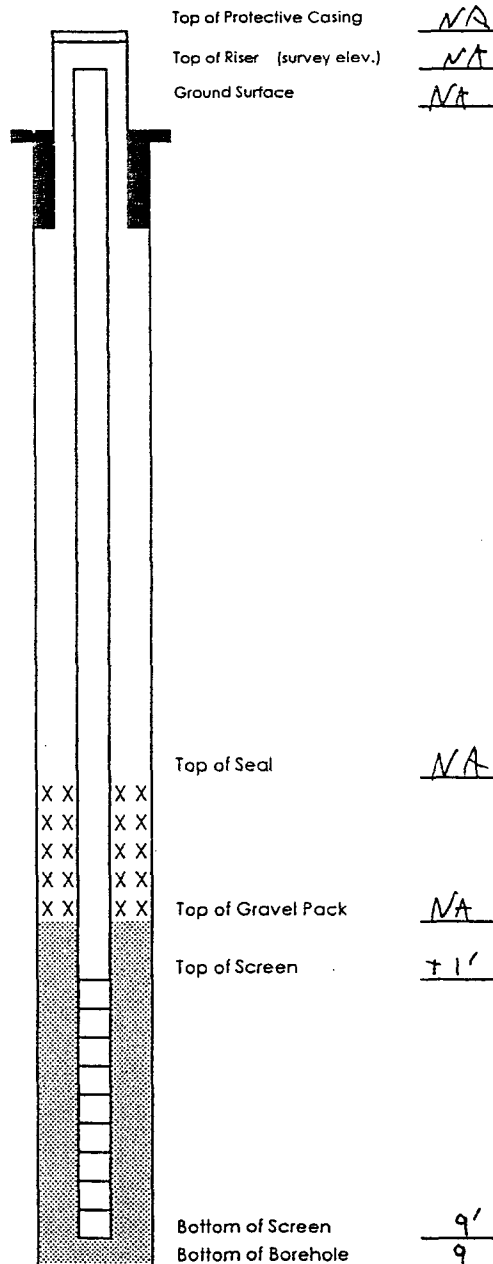
Elevation
Well Location Ltr E -S4 -T29-R14
GWL Depth
Installed By R Padilla

On-Site Geologist C CHANCE
Personnel On-Site D Charley
Contractors On-Site
Client Personnel On-Site

Date/Time Started 10/22/97
Date/Time Complete 10/22/97

COMMENTS

- P24 is 95° + 39' From MW1
- Install temp well & collect GW sample CMC 368
- BH hole plugged to surface



C. Chance

PROJECT NAME		PROJECT NUMBER		PROJECT NAME		PROJECT NUMBER	
Pit Closure Project / Well Rights		# 24324		Pit Closure Project / Well Rights		# 24324	
LAB ID	DATE	TIME	MATRIX	FIELD ID	SAMPLE TYPE	TPH EPA 418.1	BTEX EPA 8020
971139	10/22/97	0905	Water	CMC364	2	2	2
971140	-	-	-	Trip Blank	1	✓	✓
971141	10/22/97	1045	-	CMC365	2	✓	✓
971142	10/22/97	1050	-	CMC366	2	✓	✓
971143	10/22/97	1140	-	CMC367	2	✓	✓
971144	10/22/97	1430	-	CMC368	2	✓	✓
971145	10/22/97	1515	↓	CMC369	2	✓	✓
971146	10/22/97	1515	↓	CMC370*	2	✓	✓
971147	10/22/97	1515	↓	CMC371	2	✓	✓
971148	10/22/97	1515	↓	CMC372	2	✓	✓
971149	10/22/97	1515	↓	CMC373	2	✓	✓
971150	10/22/97	1515	↓	CMC374	2	✓	✓
971151	10/22/97	1515	↓	CMC375	2	✓	✓
971152	10/22/97	1515	↓	CMC376	2	✓	✓
971153	10/22/97	1515	↓	CMC377	2	✓	✓
971154	10/22/97	1515	↓	CMC378	2	✓	✓
971155	10/22/97	1515	↓	CMC379	2	✓	✓
971156	10/22/97	1515	↓	CMC380	2	✓	✓
971157	10/22/97	1515	↓	CMC381	2	✓	✓
971158	10/22/97	1515	↓	CMC382	2	✓	✓
971159	10/22/97	1515	↓	CMC383	2	✓	✓
971160	10/22/97	1515	↓	CMC384	2	✓	✓
971161	10/22/97	1515	↓	CMC385	2	✓	✓
971162	10/22/97	1515	↓	CMC386	2	✓	✓
971163	10/22/97	1515	↓	CMC387	2	✓	✓
971164	10/22/97	1515	↓	CMC388	2	✓	✓
971165	10/22/97	1515	↓	CMC389	2	✓	✓
971166	10/22/97	1515	↓	CMC390	2	✓	✓
971167	10/22/97	1515	↓	CMC391	2	✓	✓
971168	10/22/97	1515	↓	CMC392	2	✓	✓
971169	10/22/97	1515	↓	CMC393	2	✓	✓
971170	10/22/97	1515	↓	CMC394	2	✓	✓
971171	10/22/97	1515	↓	CMC395	2	✓	✓
971172	10/22/97	1515	↓	CMC396	2	✓	✓
971173	10/22/97	1515	↓	CMC397	2	✓	✓
971174	10/22/97	1515	↓	CMC398	2	✓	✓
971175	10/22/97	1515	↓	CMC399	2	✓	✓
971176	10/22/97	1515	↓	CMC400	2	✓	✓
971177	10/22/97	1515	↓	CMC401	2	✓	✓
971178	10/22/97	1515	↓	CMC402	2	✓	✓
971179	10/22/97	1515	↓	CMC403	2	✓	✓
971180	10/22/97	1515	↓	CMC404	2	✓	✓
971181	10/22/97	1515	↓	CMC405	2	✓	✓
971182	10/22/97	1515	↓	CMC406	2	✓	✓
971183	10/22/97	1515	↓	CMC407	2	✓	✓
971184	10/22/97	1515	↓	CMC408	2	✓	✓
971185	10/22/97	1515	↓	CMC409	2	✓	✓
971186	10/22/97	1515	↓				



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC364	971139
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	0905
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/24/97	10/24/97
TYPE DESCRIPTION:	PZ-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	2.97	PPB				
TOTAL XYLENES	11.4	PPB				
TOTAL BTEX	14	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 101.1 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By:

John Saldan

Date:

10-28-97

971139BTEXWP, 10/28/97



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	Trip Blank	971140
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	0905
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/24/97	10/24/97
TYPE DESCRIPTION:	Trip Blank	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 108.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By:

John L. Smith

Date:

10-28-97

971140BTEXWPTB,10/28/97



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC366	971141
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	1045
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/24/97	10/24/97
TYPE DESCRIPTION:	BH-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB				
TOLUENE	< 1	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	< 6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 98.1 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

Date: 10-28-97

971141BTEXWP,10/28/97



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC367	971142
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	1050
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/25/97	10/25/97
TYPE DESCRIPTION:	PZ-3	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	< 1	PPB				
TOLUENE	1.50	PPB				
ETHYL BENZENE	< 1	PPB				
TOTAL XYLENES	< 3	PPB				
TOTAL BTEX	< 6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 102.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

John L. Welch

Date: _____

10-28-97

971142BTEXWP, 10/28/97



EPA PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC368	971143
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/22/97	1140
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	10/25/97	10/25/97
TYPE DESCRIPTION:	PZ-4	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 102.3 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Toluene was detected in the associated vial blank at a concentration of 1.6 ppb

Approved By: _____

Date: _____

10-28-97

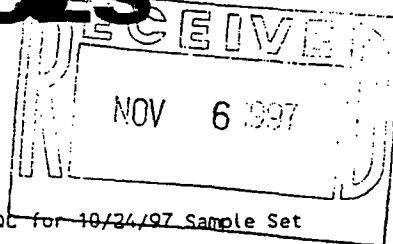
971143BTEXWP,10/28/97

EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX

Samples: 971139 to 971151

QA/QC for 10/24/97 Sample Set



LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	48.0	96.1	75 - 125 %	X
Toluene	Standard	50.0	47.8	96	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.7	95	75 - 125 %	X
m & p - Xylene	Standard	100	95.4	95.4	75 - 125 %	X
o - Xylene	Standard	50.0	47.3	95	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	24.3	97.0	39 - 150	X
Toluene	Standard	25.0	24.1	97	46 - 148	X
Ethylbenzene	Standard	25.0	24.1	96	32 - 160	X
m & p - Xylene	Standard	50.0	48.3	97	Not Given	X
o - Xylene	Standard	25.0	24.3	97	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	48.6	97.3	75 - 125 %	X
Toluene	Standard	50.0	48.6	97.3	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.6	95.1	75 - 125 %	X
m & p - Xylene	Standard	100	95.0	95.0	75 - 125 %	X
o - Xylene	Standard	50.0	47.6	95	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE YES NO	
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	48.8	97.5	75 - 125 %	X
Toluene	Standard	50.0	48.5	97.0	75 - 125 %	X
Ethylbenzene	Standard	50.0	47.2	94.5	75 - 125 %	X
m & p - Xylene	Standard	100	93.9	93.9	75 - 125 %	X
o - Xylene	Standard	50.0	47.3	94.6	75 - 125 %	X

Narrative: Acceptable.

SAMPLE ID	TYPE	RESULT PPB	RESULT PPB	RPD	RANGE	YES	NO
971148							
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	
Toluene	Matrix Duplicate	<1	1.3	200.00	+/- 20 %		X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X	
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X	

Narrative: Toluene was detected in the associated blank at the level shown. Data was qualified.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE
2nd Analysis 971148	PPB	PPB	PPB		YES NO
					RANGE
Benzene	50	<1	49.0	97.9	75 - 125 % X
Toluene	50	<1	49.2	98	75 - 125 % X
Ethylbenzene	50	<1	48.3	97	75 - 125 % X
m & p - Xylene	100	<2	96.6	96.6	75 - 125 % X
o - Xylene	50	<1	48.1	96	75 - 125 % X

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB	STATUS
		(2 analyzed with set)	
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE	PPB	STATUS
	Lot MB1461	(1 analyzed with set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	1.62	NOTED
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Data for associated samples was qualified.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB	STATUS
		(none analyzed with this set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

10/23/97 TRIP BLANK	SOURCE	PPB	STATUS
		(2 analyzed with this set)	
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: CV

Approved By:

John J. [Signature]

Date: 11-3-97



Natural Gas Company

CHAIN OF CUSTODY RECORD

Page _____ of _____

PROJECT NUMBER # 24324		PROJECT NAME Pit Closure Project						CONTRACT LABORATORY P.O. NUMBER							
LAB ID		DATE	TIME	MATRIX	FIELD ID	DATE: 10/24/97									
971158		10/24/97	-	Water	TRIP BLANK	1 TB		TPH	EPA 418.1	BTEX	EPA 8020	LAB PID	SEQUENCE #	REMARKS	
971159		10/20	↓	CMC365	2 VG									TRIP BLANK	
Mesa CPD 02643 PZ2															
Cool & Intact															

RECEIVED

NOV 12 1997

FIELD SERVICES' LABORATORY
EL PASO NATURAL GAS COMPANY
 P.O. BOX 4990
 FARMINGTON, NEW MEXICO 87499

FAX: 505-599-2761

White - Testing / abstraction Canavan - FPNAC / 17h Pink - Field Compiler

505-599-2144

FAX: 505-599-2261



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	Trip Blank	971158
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/24/97	1020
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	11/5/97	11/5/97
TYPE DESCRIPTION:	Trip Blank	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.2 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

John L. Linder

Date: _____

11/10/97

971158BTEXWPTB,11/7/97



EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	CMC365	971159
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	10/24/97	1020
PROJECT:	Well Points	
DATE OF BTEX EXT. ANAL.:	11/6/97	11/6/97
TYPE DESCRIPTION:	PZ-2	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	76.3	PPB	5	D		
TOLUENE	252	PPB	5	D		
ETHYL BENZENE	53.0	PPB	5	D		
TOTAL XYLENES	369	PPB	5	D		
TOTAL BTEX	750	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 91.4 % for this sample All QA/QC was acceptable.

DF = Dilution Factor Used

The "D" qualifier indicates that the analyte calculated is based on a secondary dilution factor.

Narrative: _____

Approved By: _____

John Sullivan

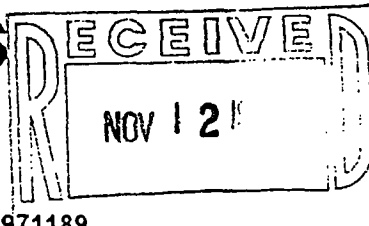
971159BTEXWP,11/7/97

Date: 11/10/97



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT
EPA METHOD 8020 - BTEX



Samples: 971158 to 971159, 871175 to 971176, 971178^{to} 971183, 971185 to 971189

QA/QC for 11/5/97 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
ICV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	46.1	92.3	75 - 125 %	X
Toluene	Standard	50.0	46.1	92	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.1	92	75 - 125 %	X
m & p - Xylene	Standard	100	92.4	92.4	75 - 125 %	X
o - Xylene	Standard	50.0	46.0	92	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
LCS LA-45476 25 PPB					YES	NO
					RANGE	
Benzene	Standard	25.0	23.4	93.5	39 - 150	X
Toluene	Standard	25.0	23.6	94	46 - 148	X
Ethylbenzene	Standard	25.0	23.3	93	32 - 160	X
m & p - Xylene	Standard	50.0	47.1	94	Not Given	X
o - Xylene	Standard	25.0	23.4	94	Not Given	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	46.4	92.8	75 - 125 %	X
Toluene	Standard	50.0	46.2	92.4	75 - 125 %	X
Ethylbenzene	Standard	50.0	46.1	92.1	75 - 125 %	X
m & p - Xylene	Standard	100	91.9	91.9	75 - 125 %	X
o - Xylene	Standard	50.0	46.1	92	75 - 125 %	X
SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
CCV LA-52589 50 PPB					YES	NO
					RANGE	
Benzene	Standard	50.0	46.2	92.4	75 - 125 %	X
Toluene	Standard	50.0	46.4	92.7	75 - 125 %	X
Ethylbenzene	Standard	50.0	45.4	90.7	75 - 125 %	X
m & p - Xylene	Standard	100	90.6	90.6	75 - 125 %	X
o - Xylene	Standard	50.0	45.5	91.1	75 - 125 %	X

Narrative: Acceptable.

Benzene	Standard	50.0	45.3	90.6	75 - 125 %	X
Toluene	Standard	50.0	44.8	89.5	75 - 125 %	X
Ethylbenzene	Standard	50.0	44.0	88.0	75 - 125 %	X
m & p - Xylene	Standard	100	87.0	87.0	75 - 125 %	X
o - Xylene	Standard	50.0	44.2	88.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
971179					RANGE	
Benzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 971179					RANGE	
Benzene	50	<1	46.6	93.2	75 - 125 %	X
Toluene	50	<1	46.3	93	75 - 125 %	X
Ethylbenzene	50	<1	46.2	92	75 - 125 %	X
m & p - Xylene	100	<2	92.1	92.1	75 - 125 %	X
o - Xylene	50	<1	46.2	92	75 - 125 %	X

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB (1 analyzed with set)	STATUS
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (1 analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (none analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

10/5/97 TRIP BLANK	SOURCE	PPB (3 analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Styrene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

errative: Acceptable.

ported By: cku

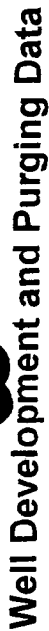
Approved By: John Lander

Date: 11/10/97

**QUARTERLY MONITORING
RESULTS**

Sample #	Meter/ Line #	Site Name	Sample Date	Project	S1	Benzene (PPB)	S2	Toluene (PPB)	S3	Ethyl Benzene (PPB)	S4	Total Xylenes (PPB)	S7	Total BTEX PPB
970261 *	02643	Mesa CPD	4/11/97	Phase II Drilling - Initial	<	1	<	1	<	1	<	3	<	6
970685 *	02643	Mesa CPD	7/17/97	Sample 4 - 1st Qtr	<	1	=	16.5	<	1	<	3	<	17
971151 *	02643	Mesa CPD	10/24/97	Sample 4 - 2nd Qtr	<	1	<	1	<	1	<	3	<	6
980013	02643	Mesa CPD	1/7/98	Sample 4 - 3rd Qtr	<	1	<	1	<	1	<	3	<	6
980320	02643	Mesa CPD	4/27/98	Sample 4 - 4th Qtr	<	1	=	18.4	<	1	<	3	=	18

* Analytical reports provided to NMOCD in prior annual report.



Well Development and Purging Data

Site Name MESA CPD

☐	Development
☒	Purging

Well Number

Meter Code 02643

Development Criteria

- ☒ 3 to 5 Casing Volumes of Water Removal
☐ Stabilization of Indicator Parameters
☐ Other

Methods of Development

- | | | |
|--------------------------|-------------|---|
| ☐ | Pump | Bailer |
| ☐ | Centrifugal | Bottom Valve ☒ |
| ☐ | Submersible | Double Check Valve ☐ |
| ☐ | Peristaltic | Stainless-steel Kemmerer ☐ |

Water Volume Calculation

Initial Depth of Well (feet) 16.35
Initial Depth to Water (feet) 8.11
Height of Water Column in Well (feet) 8.24

Diameter (inches): Well 4 Gravel Pack

Item	Water Volume in Well		Gallons to be Removed
	Cubic Feet	Gallons	
Well Casing		5.4	16.3
Gravel Pack			
Drilling Fluids			
Total			

Instruments

- ☒ pH Meter
☐ DO Monitor
☒ Conductivity Meter
☒ Temperature Meter
 Other D.O.D.

Water Disposal

KUTZ SEPARATOR

Water Removal Data

[illegible]

Comments

Developer's Signature

Yuma Bird

Reviewer

Date 1-7-98

John Jacob

Date 1/21/98



FIELD SERVICES LABORATORY
ANALYTICAL REPORT
PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980013
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	1/7/98	1435
PROJECT:	Sample 4 3rd Quarter	
DATE OF BTEX EXT. ANAL.:	1/12/98	1/12/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks:

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	0		
BENZENE	<1	PPB				
TOLUENE	<1	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	<6	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 100.6 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative:

Approved By:

John Lardi

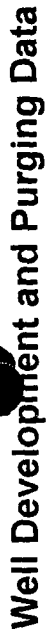
Date:

1/21/98

980013BTEXMonitorWell, 1/16/98

CHAIN OF CUSTODY RECORD

[illegible]



Well Development and Purging Data

Environment	Development	Purging
Development	☐	☒
Production	☒	☐

Well Number MW-1

Meter Code 02643

☒ 3 to 5 Casing Volumes of Water Removal
☐ Stabilization of Indicator Parameters
☐ Other

☐	Pump		Bailer
☐	Centrifugal	☒	Bottom Valve
☐	Submersible	☐	Double Check Valve
☐	Peristaltic	☐	Stainless-steel Kemmerer

Initial Depth of Well (feet) 16.35
Initial Depth to Water (feet) 7.96
Height of Water Column in Well (feet) 8.39

☒	pH Meter
☐	DO Monitor
☒	Conductivity Meter
☒	Temperature Meter
☒	Other <u>D.O. CR</u>

KUTZ SEPARATOR

[illegible]

Developer's Signature Dennis Bird

Date 4-27-98 Reviewer

Date 5/1/98

EL PASO FIELD SERVICES

FIELD SERVICES LABORATORY

ANALYTICAL REPORT PIT CLOSURE PROJECT

SAMPLE IDENTIFICATION

	Field ID	Lab ID
SAMPLE NUMBER:	N/A	980320
MTR CODE SITE NAME:	02643	Mesa CPD
SAMPLE DATE TIME (Hrs):	4/27/98	1253
PROJECT:	Sample 4 4th Quarter	
DATE OF BTEX EXT. ANAL:	4/29/98	4/29/98
TYPE DESCRIPTION:	MW-1	Water

Field Remarks: _____

RESULTS

PARAMETER	RESULT	UNITS	QUALIFIERS			
			DF	Q		
BENZENE	<1	PPB				
TOLUENE	18.4	PPB				
ETHYL BENZENE	<1	PPB				
TOTAL XYLENES	<3	PPB				
TOTAL BTEX	18	PPB				

--BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 97.4 % for this sample All QA/QC was acceptable.
DF = Dilution Factor Used

Narrative: _____

Approved By: _____

John L. Ladd

Date: _____

5/1/98

980320BTEXMW,4/30/98

5-6-98 Axel
5-6-98 Clare **A**



CHAIN OF CUSTODY RECORD

[illegible]



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 980007, 980009, 980012, 980013, 980015, 980016, 980019, 980020

QA/QC for 1/12/98 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	50.4	100.9	75 - 125 %	X
Toluene	Standard	50.0	48.5	97	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.2	96	75 - 125 %	X
m & p - Xylene	Standard	100	96.0	96.0	75 - 125 %	X
o - Xylene	Standard	50.0	48.2	96	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	24.7	98.8	39 - 150	X
Toluene	Standard	25.0	23.9	96	46 - 148	X
Ethylbenzene	Standard	25.0	23.7	95	32 - 160	X
m & p - Xylene	Standard	50.0	47.3	95	Not Given	X
o - Xylene	Standard	25.0	23.7	95	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.8	103.5	75 - 125 %	X
Toluene	Standard	50.0	49.3	98.5	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.7	97.4	75 - 125 %	X
m & p - Xylene	Standard	100	97.2	97.2	75 - 125 %	X
o - Xylene	Standard	50.0	48.8	98	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	52.3	104.5	75 - 125 %	X
Toluene	Standard	50.0	49.4	98.8	75 - 125 %	X
Ethylbenzene	Standard	50.0	48.6	97.2	75 - 125 %	X
m & p - Xylene	Standard	100	97.2	97.2	75 - 125 %	X
o - Xylene	Standard	50.0	48.8	97.7	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					RANGE	YES NO
980007						
Benzene	Matrix Duplicate	11.7	11.5	1.42	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	3.30	3.29	0.04	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	<2	<2	0.00	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					RANGE	YES NO
2nd Analysis 980007						
Benzene	50	11.7	61.6	99.8	75 - 125 %	X
Toluene	50	<1	49.8	100	75 - 125 %	X
Ethylbenzene	50	3.3	52.4	98	75 - 125 %	X
m & p - Xylene	100	<2	99.3	99.3	75 - 125 %	X
o - Xylene	50	<1	49.1	98	75 - 125 %	X

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB (1 analyzed with set)	STATUS
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (none analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (none analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

1/12/98 TRIP BLANK	SOURCE	PPB (4 analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: llv

Approved By: John Labadie

Date: 1/21/98



EL PASO FIELD SERVICES

QUALITY CONTROL REPORT EPA METHOD 8020 - BTEX

Samples: 980311 to 980320

QA/QC for 4/29/98 Sample Set

LABORATORY CALIBRATION CHECKS / LABORATORY CONTROL SAMPLES:

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
ICV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.7	103.4	75 - 125 %	X
Toluene	Standard	50.0	52.8	106	75 - 125 %	X
Ethylbenzene	Standard	50.0	53.8	108	75 - 125 %	X
m & p - Xylene	Standard	100	108.2	108.2	75 - 125 %	X
o - Xylene	Standard	50.0	52.8	106	75 - 125 %	X
LCS LA-45476 25 PPB					RANGE	
Benzene	Standard	25.0	26.1	104.5	39 - 150	X
Toluene	Standard	25.0	26.7	107	46 - 148	X
Ethylbenzene	Standard	25.0	27.1	109	32 - 160	X
m & p - Xylene	Standard	50.0	55.1	110	Not Given	X
o - Xylene	Standard	25.0	26.8	107	Not Given	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	51.0	102.0	75 - 125 %	X
Toluene	Standard	50.0	52.1	104.2	75 - 125 %	X
Ethylbenzene	Standard	50.0	53.4	106.7	75 - 125 %	X
m & p - Xylene	Standard	100	107.2	107.2	75 - 125 %	X
o - Xylene	Standard	50.0	52.1	104	75 - 125 %	X
CCV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	50.5	101.0	75 - 125 %	X
Toluene	Standard	50.0	51.2	102.4	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.8	103.5	75 - 125 %	X
m & p - Xylene	Standard	100	104.3	104.3	75 - 125 %	X
o - Xylene	Standard	50.0	51.1	102.3	75 - 125 %	X

Narrative: Acceptable.

SAMPLE NUMBER	TYPE	EXPECTED RESULT PPB	ANALYTICAL RESULT PPB	%R	ACCEPTABLE	
					YES	NO
CV LA-52589 50 PPB					RANGE	
Benzene	Standard	50.0	49.7	99.3	75 - 125 %	X
Toluene	Standard	50.0	50.2	100.5	75 - 125 %	X
Ethylbenzene	Standard	50.0	51.4	102.7	75 - 125 %	X
m & p - Xylene	Standard	100	103.6	103.6	75 - 125 %	X
o - Xylene	Standard	50.0	50.2	100.4	75 - 125 %	X

Narrative: Acceptable.

LABORATORY DUPLICATES:

SAMPLE ID	TYPE	SAMPLE RESULT PPB	DUPLICATE RESULT PPB	RPD	ACCEPTABLE	
					YES	NO
980311					RANGE	
Benzene	Matrix Duplicate	18.2	18.4	1.40	+/- 20 %	X
Toluene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X
Ethylbenzene	Matrix Duplicate	5.82	5.84	0.42	+/- 20 %	X
m & p - Xylene	Matrix Duplicate	5.50	5.5	0.51	+/- 20 %	X
o - Xylene	Matrix Duplicate	<1	<1	0.00	+/- 20 %	X

Narrative: Acceptable.

LABORATORY SPIKES:

SAMPLE ID	SPIKE ADDED PPB	SAMPLE RESULT PPB	SPIKE SAMPLE RESULT PPB	%R	ACCEPTABLE	
					YES	NO
2nd Analysis 980311					RANGE	
Benzene	50	18.2	66.1	95.8	75 - 125 %	X
Toluene	50	<1	52.2	104	75 - 125 %	X
Ethylbenzene	50	5.8	57.4	103	75 - 125 %	X
m & p - Xylene	100	5.5	109.5	104.0	75 - 125 %	X
o - Xylene	50	<1	51.7	103	75 - 125 %	X

Narrative: Acceptable

AUTO BLANK	SOURCE	PPB (1 analyzed with set)	STATUS
Benzene	Boiled Water	<1.0	ACCEPTABLE
Toluene	Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

SOIL VIAL BLANK	SOURCE Lot MB1461	PPB (1 analyzed with set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

CONTAMINATION CARRYOVER CHECK	SOURCE	PPB (none analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

TRIP BLANK	SOURCE	PPB (3 analyzed with this set)	STATUS
Benzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Toluene	Vial + Boiled Water	<1.0	ACCEPTABLE
Ethylbenzene	Vial + Boiled Water	<1.0	ACCEPTABLE
Total Xylenes	Vial + Boiled Water	<3.0	ACCEPTABLE

Narrative: Acceptable.

Reported By: CKV

Approved By: John Fadden

Date: 5/1/98